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*Office Memorandum*

UNITED STATES GOVERNMENT

TO :

DATE: 12 February 1960

STATINTL

FROM :

SUBJECT: Image Edge Enhancement Viewer

Use of this viewer during the last 48 hours has established the following:

a. The light source has insufficient intensity for any transparencies with a density value greater than 1.0. This value being an exception rather than a rule, it is virtually impossible to use current aerial photography in the machine. It may be possible to intensify the light by means of a condensing system built into the illuminator.

b. Viewing at 1:1 the machine defeats its purpose in that only the strongest edges already in the photograph are enhanced. The low contrast imagery which we want to enhance is filtered out.

This leaves two lines of approach-- either (a) we make an enlargement in the order of 10X of the low contrast image requiring enhancement, or (b) the magnification factor of the machine is increased so that we can select the low-contrast image alone for enhancement.

If we adopt (a) we are introducing a further generation image with consequent losses. To avoid losses, we would preferably enlarge into a fine glass plate, but the immersion image holder will only take film. It was found that minicard film was difficult to insert in the holder.

c. One of the worst features is accessibility for cleaning. The diffraction patterns set up by dust tends to obliterate the image. The second pair of lenses behind the filter wheels are extremely hard to clean without virtually dismantling the machine.

d. The eyepiece is somewhat difficult to use, making prolonged viewing a very tiring and difficult proposition. Some form of binocular viewing would be preferable to reduce operator fatigue.

Therefore, we suggest that some time in the near future these points be discussed with Itek to see if the above objections can be overcome.

STATINTL

